



CALTRANS REGIONAL OPERATIONS FORUMS

Freight and Goods Movement



What are Freight Operations?





What are Freight Operations?



Last Mile



Long Haul



Who Makes Decisions About Where Goods Move?

Decision Maker	Type of Decision	What Governs the Decisions?
Shipper Broker Consignee	<ul style="list-style-type: none"> Pick-up location Drop-off location Mode(s) Gateways and transfers (ports, terminals) routes and corridors schedule 	<ul style="list-style-type: none"> Total Logistics Costs Regulatory Compliance <div style="text-align: center; font-size: 2em; color: green;"> \$ \$ \$ </div>
Trucker	<ul style="list-style-type: none"> Some routing decisions Where to park 	<ul style="list-style-type: none"> Bottom line costs Compliance (i.e. HOS) Information on travel and routes



Freight and District 1

- ▶ What are some of the biggest issues for freight on District 1 corridors?
- ▶ How is freight considered in some of the District's planning and project development processes?
- ▶ Is there any collaboration with the freight industry? If so, what kind?



What Can Agencies Do to Improve Freight Operations?

- Identify and mitigate operations issues
 - Recurring bottlenecks
 - Maintain fluidity
 - Safety hotspots
- Disseminate / integrate information
 - Road conditions
 - Truck parking
 - Truck routing
- Collaborate with the private sector



Florida DOT



Truck Bottlenecks

Potential Mitigating Actions

Correct Capacity Deficiencies

- Low capacity left exits
- More through lanes

Shift or Reduce Facility Demand

- Managed lanes
- Multimodal investments

Implement Aggressive Incident Management

- Traveler information systems
- Queue warning system
- Quick clearance

Deploy Portfolio Approaches

- Multimodal strategies
(combination of strategies)

Freight Fluidity

Maintaining Reliable Access

- Traffic operations works with freight planners & carriers to:
 - Identify the truck routes
 - Identify the major generators (e.g. airports, seaports, distribution centers)
 - Assess performance
- Implement measures to improve performance (e.g. signal timing, traveler information, etc.)



Florida DOT

Incident Management Aggressive Quick Clearance

- Contracts with heavy duty wreckers
 - Access to specialized equipment (e.g. air cushions for overturned trucks)
- Monetary incentives for rapid response
 - Georgia TRIP (Towing and Recovery Incentive Program)
 - Florida RISC (Rapid Incident Scene Clearance)
- Quick clearance laws and procedures





Incident Management

Florida Rapid Incident Scene Clearance (RISC)

- Started on Florida Turnpike in 2004, since expanded throughout Florida and to several states
- RISC Contractor operating parameters
 - a) 60 minutes to arrive at scene with required equipment
 - b) 90 minutes to clear the travel lanes and clear debris
- Contractor received \$2,500 bonus if a) and b) accomplished
- After 90 minutes, the contractor loses the incentive
- After 180 minutes, the contractor may be assessed liquidated damages



Incident Management Oversize / Overweight

- Contingency planning for OS/OW

- Knowledge of OS/OW routes and shipment types
- Best practices for clearance
- Detour planning
- Notification procedures

- Contracts with heavy duty wreckers

- Access to specialized equipment (e.g. cranes)

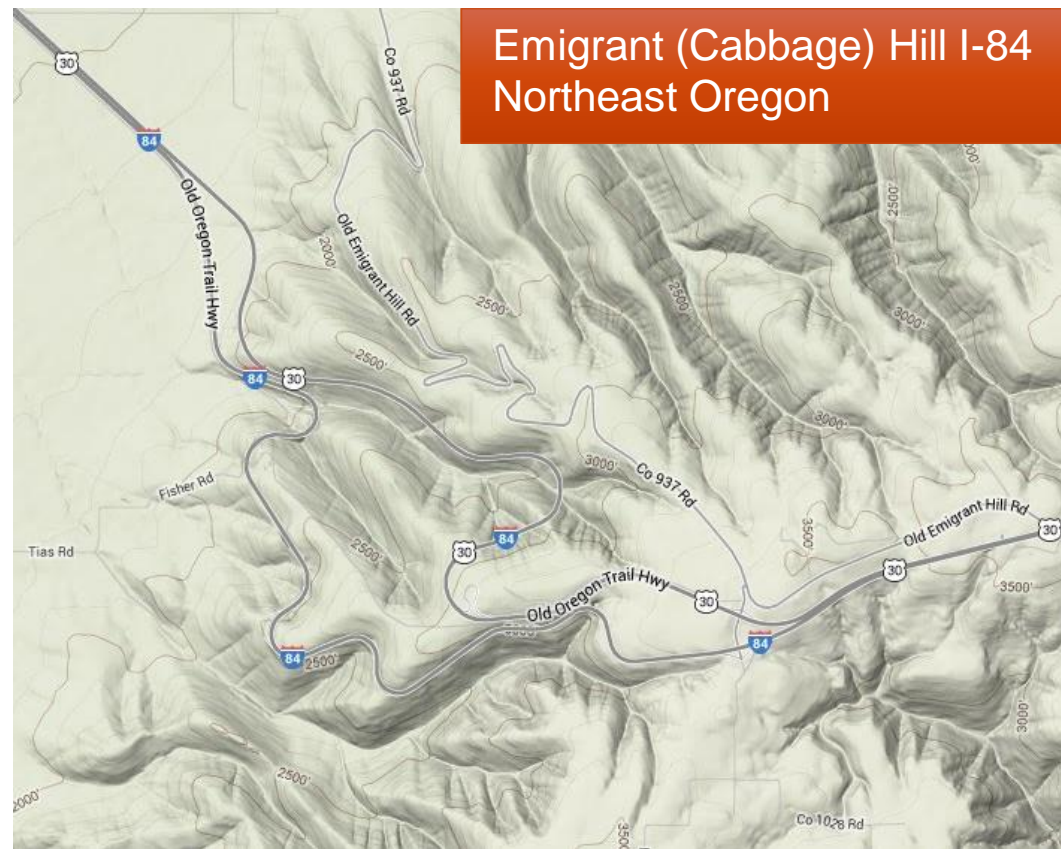


Oregon DOT

Safety Hotspots

Oregon Downhill Speed Information System

- 6% Grade
- 2,000' elevation change (9 miles)
- Double hairpin turn
- 51 truck accidents from 2003 to 2007 (31 truck at fault)
- 78% are out of state motor carriers

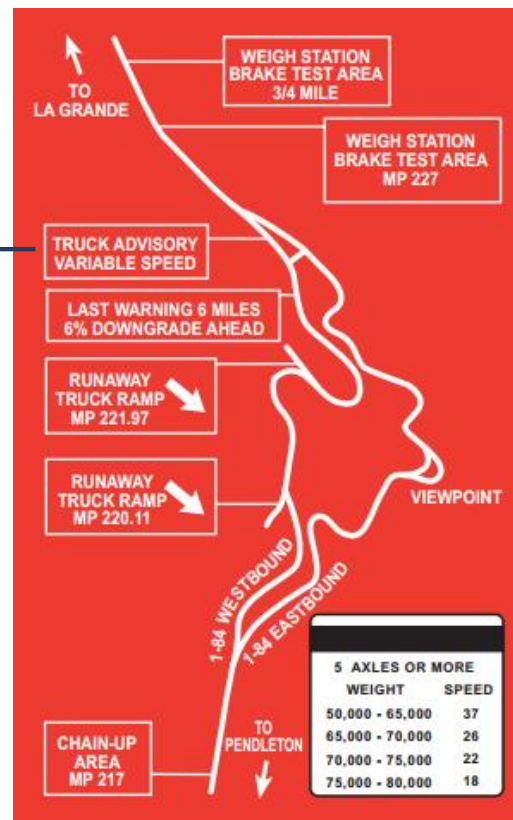


Safety Hotspots

Oregon Downhill Speed Information System



5 AXLES OR MORE WEIGHT	SPEED
60000 - 65000	37
65000 - 70000	26
70000 - 75000	22
75000 - 80000	18



- Upstream WIM relates weight to transponder in truck to issue advisory
- Public information campaign
- 13 percent reduction in crashes

Keeping Freight Informed WSDOT Real Time Restrictions



Zoom in on the map to view more routes.

If you do not see the route you are looking for,
no problems have been reported.

Interstate: I-90
US Highways: US 2 US 12
State Highways: SR 9 SR 10 SR 17 SR 28 SR 123 SR 153 SR 162 SR 165 SR 169 SR 202 SR 203 SR 243 SR 285 SR 410 SR 522 SR 821

[View all routes](#)

- Recent bridge restrictions added in the last 10 days
- Bridge restriction
- Recent road restrictions added in the last 10 days
- Road restriction
- Rest area

Oversize/Overweight Restrictions	
Showing 8 of 38 Restrictions	Printer Friendly
I-90, MP: 78 to 88, Direction: Both	
New	<p>Date Updated: 5/8/2015 11:04 AM Original Date: 5/8/2015 12:00 AM Effective Monday, May 11th-Thursday, May 14th on I-90 mileposts 78-88 both directions. Westbound: No loads over 12' wide Monday, May 11 from 7am to 4pm. Eastbound: No loads over 12' wide, Tuesday, May 12 through Thursday, May 14, from 7am to 4pm each day.</p>
More	
I-90, MP: 56 to 64, Direction: E	
New	<p>Date Updated: 5/8/2015 10:47 AM Original Date: 5/8/2015 12:00 AM CURRENT RESTRICTION (5/8 - 5/17) - Eastbound: No loads over 12' wide Friday and Saturday nights, May 8 and 9, and Monday through Friday nights, May 11 through May 15, from 8pm to 9am the following morning. Sunday, May 17 from 6:30am to 1:30pm: No loads over 16' wide. No restrictions westbound.</p>
More	
I-90, MP: 137, Direction: Both	
New	<p>Date Updated: 5/8/2015 8:43 AM Original Date: 5/11/2015 12:00 AM I-90, Vantage Bridge, both directions - No loads over 14' wide from 6am-6pm each day, Monday, May 11 through Friday, May 15 and Monday, May 18 through Thursday, May 21.</p>
More	
I-90, MP: 137 to 138, Direction: E	
New	<p>Date Updated: 5/8/2015 8:38 AM Original Date: 5/26/2015 12:00 AM ADVANCE RESTRICTION NOTICE - Eastbound Only - Beginning Tuesday, May 26 through November 1: No loads over 14' wide 24 hours per day, 7 days a week. Possible detour route available via I-82, I-182, and US 395.</p>
More	
I-90, MP: 136.22 to 138.41, Direction: Both	
New	<p>Date Updated: 5/6/2015 8:32 AM Original Date: 6/1/2015 12:00 AM Effective June 1st-5th from 7:30am to 3:30pm daily. No loads over 10' wide allowed. WSDOT crews will be conducting a bridge inspection at this time.</p>
More	

WSDOT Commercial Vehicle Website

- Highlights most recent restrictions (bridge and road)

Truck Parking National Shortage

- Severe shortage of safe, legal parking options
 - Nearly half of trucker search an hour daily
- 2.2 million registered long-haul trucks in U.S.
- US DOT, state DOTs, and private sector working to improve information and allocation of spots



Truck Parking

State Initiatives: UDOT Truck Parking Program



Truck Parking Reservation Systems



ABOUT

FIND PARKING

CONTACT

Find Parking

LOCATION

ZIP or Address

AVAILABILITY

☒ Show only lots with
availability



/ Kimley»Horn

Truck Parking Crowdsourced Information



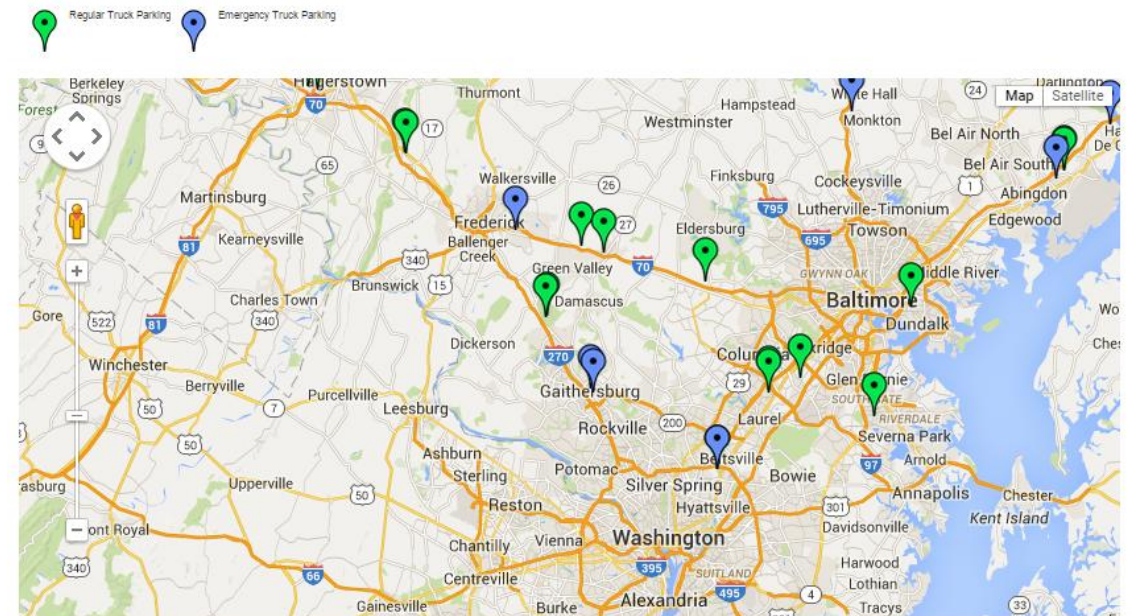
- Trucker Path
 - Allows users to input truck parking availability at truck stops and other locations across U.S.
 - Detects when trucks are at a stop
 - 200,000 users
- Telogis Route Planning App
 - Crowd sources parking information
 - Integration of route planning / HOS
 - 140,000 users



Truck Parking

Emergency Truck Parking

- Maryland State Highway Administration'
 - Allows for emergency truck parking in select Park and Ride lots if more than 6" of snow falls





Truck Parking

Emergency Truck Parking: Regional Cooperation

- Weather events require regional cooperation
 - Truckers need to know where to part and wait during an extreme event (e.g. highway closed in Montana).
- I-80 Winter Operations Coalition
 - California and Nevada (and the other states of the I-80 Winter Weather Corridor) coordinate closures.
 - Nevada is working with municipalities to identify truck parking when roads are closed in California (Sierra Nevada passes).



Connected Trucks

- U.S. DOT Safety Pilot Model Deployment includes trucks (Fall 2012 to Fall 2013)
- 3 trucks integrated with wireless crash warning devices
- Driver clinics with a cross section of commercial drivers. that will be part of separate truck driver clinics.
- Closed-course environment



Connected Trucks: USDOT CV Pilot Wave 1 Wyoming I-80

- Objective: Reduce the number of weather related incidents (including secondary incidents) in the corridor
- High elevation corridor
- Oct-May blowing snow and poor visibility
- 3,470 high wind crashes from 2002 to 2010



Connected Trucks: USDOT CV Pilot Wave 1 Wyoming I-80

- Vehicle to infrastructure (V2I) and vehicle to vehicle (V2V) connectivity to connect:
 - snow plows
 - trucks
 - fleet management centers
 - roadside equipment
- Provide real-time advisories both to trucks and personal vehicles en-route as well before entering the I-80 corridor.
- Applications will support roadside alerts, parking notifications, dynamic routing guidance, weather responsive variable speeds





Autonomous Trucks

Nevada Pilot

- Daimler Freightliner “Inspiration” to test on Nevada state highway and interstates
- “Highway Pilot” intelligent system functions like auto pilot in an airplane
- The technology is ahead of the legal framework
 - How is accident liability established?
- Financially viable when a corridor of states allows the vehicle
 - The potential for platooning is a huge incentive

The Next Big Thing Big Data in Freight Operations

- Private sector is just getting started
 - 8% of shippers and 5% of 3PLs surveyed have implemented “Big Data” supply chain initiatives*
- Public sector utilizing big data (truck GPS) for performance, exploring other applications (e.g. regional operations).

“The major benefits from data come from answering unanticipated questions.”
- Peter Kivestu, Teradata



*From Jim Taylor "Fusing Big Data and the Supply Chain: The Future is NOW." *Inbound Logistics* April 2014.) Source: 2014 18th Annual Third-Party Logistics Study produced by Dr. C. John Langley and Caggemini Consulting.



Public Agency Role

How can you facilitate goods movement?

- Know what truckers and shippers think about operations.
- Know the key industries of your state and corridor and their needs (and supply chains).
- Understand what kinds of information freight needs – find ways to engage freight in key processes.
- What are some other strategies you have tried?



Questions and Discussion

